

WHAT IS CLAIMED IS:

- 1 1. A method for displaying connections in a system for displaying a network  
2 topology, the method comprising  
3 displaying first and second nodes on the display screen;  
4 defining a plurality of lines for connecting the first node to the second node, wherein  
5 the plurality of lines include a first line group parallel to a first direction and a second line  
6 group parallel to a second direction, wherein lines in the second line group are not parallel  
7 with lines in the first line group;  
8 displaying a connection between the first and second nodes according to the following  
9 substeps:  
10 selecting a line from the first line group, wherein the selected line is coupled  
11 to the first node;  
12 choosing a line from the second line group that intersects the selected line,  
13 wherein the step of choosing includes proceeding on a path from the first node along the  
14 selected line until an obstructing node is encountered and then using the last intersecting line  
15 passed as the chosen line, but if there is no obstructing node then using the first intersecting  
16 line encountered after passing the midpoint of the selected line as the selected line; and  
17 displaying a connection between the chosen line and the second node.
- 1 2. The method of claim 1, wherein the step of displaying a connection between the chosen  
2 line to the second node includes substeps of  
3 selecting a second line from the first line group, wherein the selected second  
4 line is coupled to the chosen line;  
5 determining a second line from the first line group that intersects the chosen  
6 line, wherein the step of determining includes proceeding on a path from the intersection  
7 point of the selected line and the chosen line and moving along the chosen line until an  
8 obstructing node is encountered and then using the last intersecting line passed as the  
9 determined line, but if there is no obstructing node then using the first intersecting line  
10 encountered after passing the midpoint of the chosen line as the determined line; and  
11 displaying a connection between the determined line and the second node.
- 1 3. The method of claim 1, wherein the first and second directions are perpendicular to each  
2 other.

3 4. The method of claim 3, wherein the first direction is horizontal and the second direction is  
4 vertical.

1 5. The method of claim 1, wherein the first and second nodes belong to a first node group,  
2 wherein multiple node groups are organized into a hierarchy.

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1 6. A method for displaying connections in a system for displaying a network topology, the  
2 method executing in a digital processing system, the digital processing system including a  
3 processor coupled to a display, the display including a depiction of first and second nodes,  
4 the method comprising

5 displaying horizontal and vertical lines on the display to connect the first and second  
6 nodes, wherein the path from the first node to the second node alternates between horizontal  
7 and vertical lines, wherein a horizontal and vertical line along the path are connected at a  
8 crosspoint;

9 selecting the crosspoint such that no obstructing node is encountered along the path;  
10 and

11 ensuring that the crosspoint occurs beyond a predetermined distance along a given  
12 line unless this causes the path to cross an obstructing node, in which case the crosspoint is  
13 made to be before the obstructing node.

1 7. The method of claim 6, wherein the predetermined distance along the given line is  
2 measured with respect to the first node.

3 8. The method of claim 6, wherein the predetermined distance along the given line is  
4 measured with respect to a crosspoint.

1 9. An apparatus for displaying connections in a system for displaying a network topology,  
2 the apparatus using a digital processing system, the digital processing system including a  
3 processor coupled to a display, the display including a depiction of first and second nodes,  
4 the apparatus comprising  
5 a process for displaying horizontal and vertical lines on the display to connect the first  
6 and second nodes, wherein the path from the first node to the second node alternates between  
7 horizontal and vertical lines, wherein a horizontal and vertical line along the path are  
8 connected at a crosspoint;  
9 a process for selecting the crosspoint such that no obstructing node is encountered  
10 along the path; and  
11 a process for ensuring that the crosspoint occurs beyond a predetermined distance  
12 along a given line unless this causes the path to cross an obstructing node, in which case the  
13 crosspoint is made to be before the obstructing node.

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1 10. A computer-readable medium comprising

2 one or more instructions for displaying horizontal and vertical lines on the display to  
3 connect the first and second nodes, wherein the path from the first node to the second node  
4 alternates between horizontal and vertical lines, wherein a horizontal and vertical line along  
5 the path are connected at a crosspoint;

6 one or more instructions for selecting the crosspoint such that no obstructing node is  
7 encountered along the path; and

8 one or more instructions for ensuring that the crosspoint occurs beyond a  
9 predetermined distance along a given line unless this causes the path to cross an obstructing  
10 node, in which case the crosspoint is made to be before the obstructing node.

1 11. A digital signal included in a carrier wave comprising

2 one or more instructions for displaying horizontal and vertical lines on the display to  
3 connect the first and second nodes, wherein the path from the first node to the second node  
4 alternates between horizontal and vertical lines, wherein a horizontal and vertical line along  
5 the path are connected at a crosspoint;

6 one or more instructions for selecting the crosspoint such that no obstructing node is  
7 encountered along the path; and

8 one or more instructions for ensuring that the crosspoint occurs beyond a  
9 predetermined distance along a given line unless this causes the path to cross an obstructing  
10 node, in which case the crosspoint is made to be before the obstructing node.

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